

Amendments to the Claims:

1. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[[:]] radiating : delivering ions of relatively low mass and possessing sufficient energy onto said nano-tube in order to produce dangling bonds along the nano-tube surface; and oxidizing said nano-tube.
2. (Original) A fabrication method of a nano-tube according to claim 1, wherein, in said ion radiating step, after an element had been ionized, said resultant ions are accelerated by an electric field and thereby radiated onto said nano-tube.
3. (Original) A fabrication method of a nano-tube according to claim 1, wherein an element had been reduced into plasma condition and said ions that have been produced in said plasma condition creating process, are radiated onto said nano-tube.
4. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[[:]]: heating said nano-tube at a temperature of from 300 to 800°C.; and radiating ions onto said nano-tube thus-heated.
5. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[[:]]: heating said nano-tube at a temperature of from 300 to 800°C.; and radiating an atomic state of atoms and ions onto said nano-tube thus-heated, simultaneously.

6. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[:]; heating said nano-tube at a temperature of from 300 to 800°C.; ~~and radiating~~ delivering ions of relatively low mass and sufficient energy onto said nano-tube thus-heated in order to produce dangling bonds along the nano-tube surface; ~~ions onto said nano-tube thus-heated;~~ and oxidizing said nano-tube.

7. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[:]; placing said nano-tube on a glass substrate; heating said nano-tube at a temperature of from 300°C. to a temperature lower than a distortion point of said glass substrate; ~~radiating ions onto said nano-tube thus-heated;~~ delivering ions of relatively low mass and sufficient energy onto said nano-tube thus-heated in order to produce dangling bonds along the nano-tube surface; and oxidizing said nano-tube.

8. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[:]; heating said nano-tube at a temperature of from 300 to 800°C.; ~~radiating~~ delivering ions of relatively low mass and sufficient energy and an atomic state of atoms onto said nano-tube thus-heated, simultaneously; in order to produce bonds along the nano-tube surface; and oxidizing said nano-tube.

9. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[:]; placing said nano-tube on a glass substrate; heating said nano-tube at a temperature of from 300°C. to a temperature lower than a distortion point of said glass substrate; ~~radiating~~ delivering ions of relatively low mass and sufficient energy

and an atomic state of atoms onto said nano-tube thus-heated in order to produce dangling bonds along the nano-tube surface simultaneously; and oxidizing said nano-tube.

10. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[[:]]; radiating ions onto said nano-tube; heating said nano-tube at a temperature of from 300 to 800°C.; and radiating ions onto said nano-tube thus-heated.

11. (Currently Amended) A fabrication method of a nano-tube, comprising the steps of[[:]]; radiating ions onto said nano-tube; heating said nano-tube at a temperature of from 300 to 800°C., and radiating ions and an atomic state of atoms onto said nano-tube thus-heated, simultaneously.

12. (Original) A fabrication method of a nano-tube according to claim 1, wherein said nano-tube is a carbon nano-tube.

13. (Currently Amended) A manufacturing method of a field-emission type cold cathode, comprising an emitter containing therein nano-tubes, an insulating layer and gate electrode provided so as to surround said emitter, and an anode electrode provided on said gate electrode to thereby cause an emission of electrons from said emitter by applying a voltage to said emitter, said method comprising the steps of[[:]]; introducing a gas onto said emitter; applying a voltage to one of said gate

electrode, said anode electrode, and a newly provided electrode to thereby cause an emission of said electrons; ionizing said gas; and ~~radiating said ions onto said nano-tubes, delivering ions of relatively low mass and sufficient energy onto said nano-tube thus-heated in order to produce dangling bonds along the nano-tube surface.~~

14. (Currently Amended) A manufacturing method of a field-emission type cold cathode, comprising an emitter containing therein nano-tubes, an insulating layer and gate electrode provided so as to surround said emitter, and an anode electrode provided on said gate electrode to thereby cause an emission of electrons from said emitter by applying a voltage to said emitter, said method comprising the steps of; introducing a gas onto said emitter; applying a voltage to one of said gate electrode, said anode electrode, and a newly provided electrode to thereby cause an emission of said electrons; ionizing said gas; radiating said ~~ions~~ ionized gas onto said nano-tubes; and oxidizing said nano-tubes.

15- 27 (Canceled)

28. (New) The fabrication method of a nano-tube according to claim 1, wherein in said delivering step, said ion is selected from a group of kinds of atomic consisting hydrogen, nitrogen and argon.

29. (New) The fabrication method of a nano-tube according to claim 6, wherein in said delivering step, said ion is selected from a group of kinds of atomic consisting hydrogen, nitrogen and argon.

30. (New) A fabrication method of a nano-tube, a substrate on which a nano-tube is formed and is exposed in a plasma atmosphere.